Natural disasters and people displacements in South East Asia

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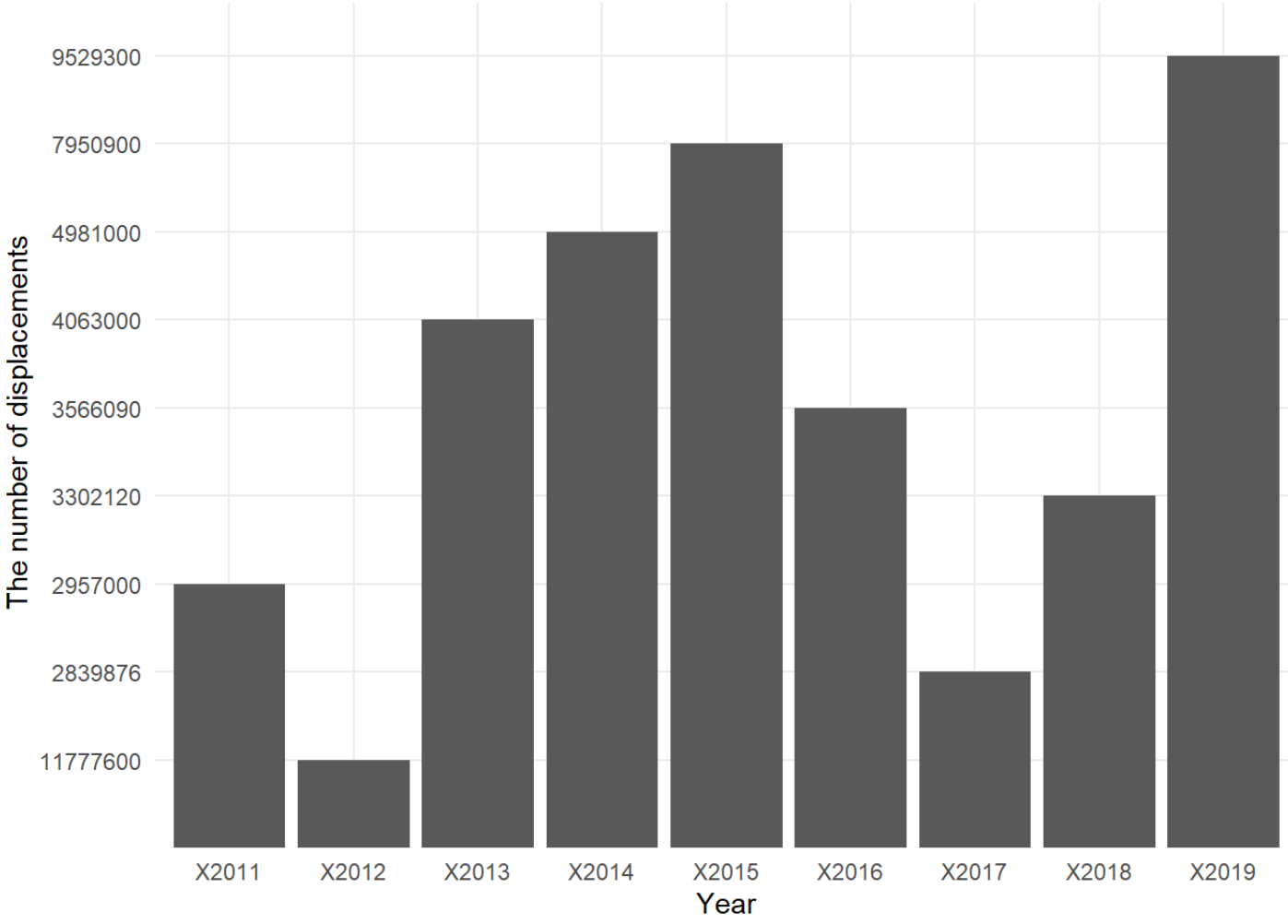
```
idp_dt <- read.table("IDP_data.csv", sep = ";", header = TRUE, stringsAsFactors = FALSE)

# We have three countries for which we don't have data at all or not enough data for the
analysis: Brunei, Singapore and Timor-Leste. So we take them out.

idp_clean <- idp_dt[-c(7,10,11),]

idp_clean_t <- as.tibble(idp_clean)

#Preparing data for South Asia graph (practice)

#1. Selecting needed row and dropping unnecessary column;
SE_idp <- idp_clean_t %>%
  filter(Country.Name == c("South Asia")) %>%
  select(-2)

#2. Reshaping data from wide to long format;

SE_idp_long <- melt(data = SE_idp,
                    id.vars = "Country.Name",
                    variable.name = "Year",
                    value.name = "IDPs")

SE_idp_bar <- ggplot(SE_idp_long, aes(x = Year, y = IDPs)) +
  geom_bar(stat = "identity") +
  theme_minimal() +
  labs(x= "Year", y = " The number of displacements")
SE_idp_bar
```




```
# Preparing data for individual countries

country_idp <- idp_clean_t %>%
  filter(Country.Name %in% c("Cambodia", "Indonesia", "Philippines", "Malaysia", "Thailan
d", "Lao PDR", "Myanmar", "Vietnam")) %>%
  select(-2)

country_idp %>% mutate_at(vars(X2011, X2012, X2013, X2014, X2015, X2016, X2017, X2018, X2
019), as.numeric)
```

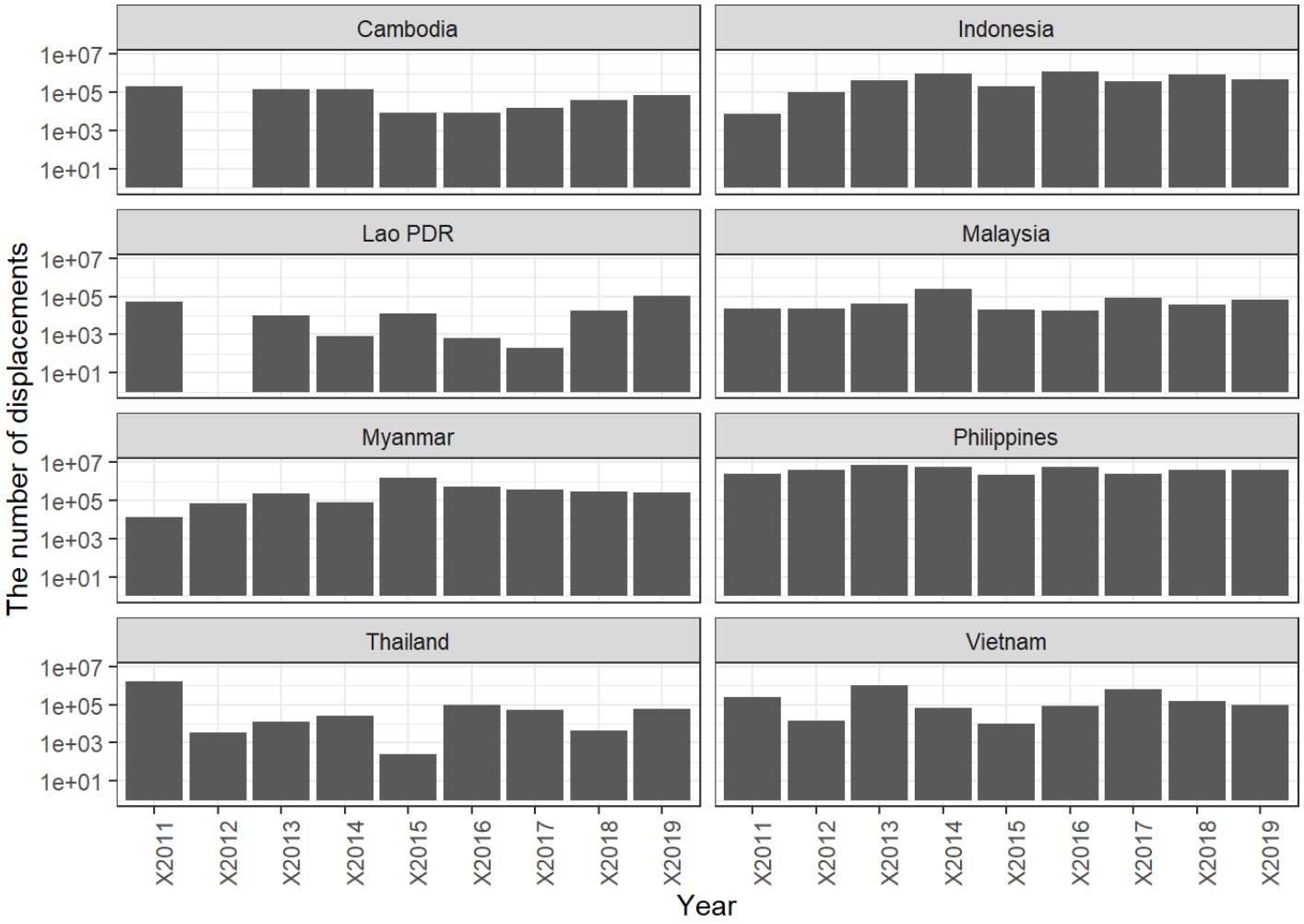
```
## # A tibble: 8 x 10
##   Country.Name   X2011   X2012   X2013  X2014  X2015  X2016  X2017  X2018  X2019
##   <chr>          <dbl>   <dbl>   <dbl>  <dbl>  <dbl>  <dbl>  <dbl>  <dbl>  <dbl>
## 1 Cambodia      214000      NA  144000 1.51e5 8.90e3 8.30e3 1.50e4 3.70e4 7.00e4
## 2 Indonesia       7400  104000  427000 9.43e5 2.04e5 1.25e6 3.65e5 8.53e5 4.63e5
## 3 Philippines  2499000 3859000 7022000 5.79e6 2.22e6 5.93e6 2.53e6 3.80e6 4.09e6
## 4 Malaysia       24000   22000   43000 2.56e5 2.10e4 1.80e4 8.20e4 3.80e4 6.30e4
## 5 Thailand     1645000    3400   13000 2.70e4 2.40e2 9.00e4 5.00e4 4.60e3 6.10e4
## 6 Lao PDR        50000      NA    9900 7.90e2 1.20e4 6.60e2 1.90e2 1.90e4 1.03e5
## 7 Myanmar        13000   74000  223000 8.10e4 1.62e6 5.09e5 3.51e5 2.98e5 2.70e5
## 8 Vietnam       230000   15000 1040000 6.80e4 9.60e3 8.10e4 6.33e5 1.43e5 8.90e4
```

```
country_idp_long <- melt(data = country_idp,
                         id.vars = "Country.Name",
                         variable.name = "Year",
```

```
                          value.name = "IDPs")

country_idp_long_t <- as.tibble(country_idp_long) %>%
  mutate_at(vars(IDPs), as.numeric)

country_idp_long_t
```

```
## # A tibble: 72 x 3
##    Country.Name Year     IDPs
##    <chr>        <fct>   <dbl>
##  1 Cambodia     X2011  214000
##  2 Indonesia    X2011    7400
##  3 Philippines  X2011 2499000
##  4 Malaysia     X2011   24000
##  5 Thailand     X2011 1645000
##  6 Lao PDR      X2011   50000
##  7 Myanmar      X2011   13000
##  8 Vietnam      X2011  230000
##  9 Cambodia     X2012      NA
## 10 Indonesia    X2012  104000
## # ... with 62 more rows
```

```
country_idp_bar <- ggplot(country_idp_long_t, aes(x = Year, y = IDPs)) +
  geom_bar(stat = "identity") +
  labs(x = "Year", y = "The number of displacements") +
  facet_wrap(~Country.Name, ncol = 2) +
  theme_bw() +
  theme(axis.text.x = element_text(angle = 90, hjust = 1)) +
  scale_y_log10()

country_idp_bar
```



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.